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Developing a new resource and energy saving technology of precision application of powder coating multifunctional systems(Conference Paper)(Открытый доступ)

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Краткое описание

This paper presents new results of microhardness, corrosion resistance tests, and the structure-phase compositions study of the powder Ni-based coatings deposited by microplasma spraying onto the steel substrate. It is shown that the predicted specific structure with nanosized lamellas of intermetallic phases has been obtained due to the well-founded selection of energy saved modes of microplasma processing. The precision application of powder coating for protecting the surfaces of industrial products is achieved by using a material micro plasma processing unit which includes an industrial robot. The study showed that microhardness and corrosion resistance of the coated surface are significantly increased.